Laxman Alreja. P.E.
AAA Galvanizing, Inc.
625 Miles Road
P.O. Box 2396
Joliet, IL 60434

Re: Registered Construction and Operation Status,
151-13817-00055

Dear Mr. Alreja:

The application from AAA Galvanizing, Inc. received on January 24, 2001, has been reviewed. Based on the data submitted and the provisions in (326 IAC 2-5.1), it has been determined that the following Job Shop Galvanizing Plant, to be located at 7825 South Homestead Drive, Hamilton, Indiana, is classified as registered:

(a) One (1) natural gas-fired heater rated at 0.2 MMBtu/hr venting to the atmosphere.

(b) Six (6) natural gas-fired heaters (H1-H6) each rated at 3.5 MMBtu/hr venting to the atmosphere.

(c) One (1) galvanizing kettle (S1) with a maximum process rate of 29,100 lbs/hr.

The following conditions shall be applicable:

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the galvanizing kettle shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P\ 0.67$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

Assuming a process rate of 30,000 lbs/hr, the allowable PM emissions are 25.16 lbs/hr.

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to (326 IAC 2-5.1-2(f)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/RB

cc: File - Steuben County
Steuben County Health Department
Air Compliance - Doyle Houser
Northern Regional Office
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3).

Company Name:	AAA Galvanizing, Inc.
Address:	7825 South Homestead Drive
City:	Hamilton, Indiana
Authorized individual:	Laxman Alreja, P.E.
Phone #:	815-723-5000
Registration #:	151-13817-00055

I hereby certify that AAA Galvanizing, Inc. is still in operation and is in compliance with the requirements of Registration 151-13817-00055.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: AAA Galvanizing, Inc.
Source Location: 7825 South Homestead Drive, Hamilton, Indiana
County: Steuben
SIC Code: 3479
Operation Permit No.: 151-13817-00055
Permit Reviewer: ERG/RB

The Office of Air Quality (OAQ) has reviewed an application from AAA Galvanizing, Inc. relating to the construction and operation of a Job Shop Galvanizing Plant.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

(a) One (1) natural gas-fired heater rated at 0.2 MMBtu/hr venting to the atmosphere.

(b) Six (6) natural gas-fired heaters (H1-H6) each rated at 3.5 MMBtu/hr venting to the atmosphere.

(c) One (1) galvanizing kettle (S1) with a maximum process rate of 29,100 lbs/hr.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on January 24, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1-4.)

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount

of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	11.00
PM-10	11.00
SO_2	0.06
VOC	0.51
CO	7.80
NO_x	9.29

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM is less than twenty-five (25) tons per year and greater than or equal to five (5) tons per year, therefore, the source is subject to the provisions of 326 IAC 2-5.5.

County Attainment Status

The source is located in Steuben County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Steuben County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Steuben County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	11.00
PM10	11.00
SO_2	0.06

VOC	0.51
CO	7.80
NO_x	9.29

(a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Steuben County and the potential to emit VOC and NO_X is less than ten (10) tons per year, therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This source does not have potential HAP emissions equal to or greater than ten (10) tons per year, therefore this source is not subject to the provisions of 326 IAC 2-4.1.

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

This source does not have potential VOC emissions equal to or greater than twenty five (25) tons per year, therefore this source is not subject to the provisions of 326 IAC 8-1-6.

State Rule Applicability - Individual Facilities

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the Galvanizing Kettle shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

E = 4.10 P 0.67 where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

Assuming a process rate of 30,000 lbs/hr, the allowable PM emissions are 25.16 lbs/hr. The hourly potential PM emissions from this source is 2.35 lbs/hr, which is less than the allowable PM emission.

Conclusion

The construction and operation of this Job Shop Galvanizing Plant shall be subject to the conditions of the attached proposed Registration 151-13817-00055.

Appendix A: Emissions Calculations - Summary

Company Name: **AAA Galvanizing, Inc.**
Address City IN Zip: **7825 S. Homesead, Hamilton, Indiana 46742**
CP: **151-13817**
Plt ID: **151-00055**
Reviewer: ERG/RB
Date: February 1, 2001

Uncontrolled Potential Emissions (tons/yr)

Process	PM*	PM10*	SO2	NOx	VOC	CO
Combustion	0.71	0.71	0.06	9.29	0.51	7.80
Galvanizing Kettle	10.29	10.29				
Total	**11.00**	**11.00**	**0.06**	**9.29**	**0.51**	**7.80**

Uncontrolled Potential Emissions (lbs/hr)

Process	PM*	PM10*	SO2	NOx	VOC	CO
Combustion	0.16	0.16	0.01	2.12	0.12	1.78
Galvanizing Kettle	2.35	2.35				
Total	**2.51**	**2.51**	**0.01**	**2.12**	**0.12**	**1.78**

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **AAA Galvanizing, Inc.**
Address City IN Zip: **7825 S. Homesead, Hamilton, Indiana 46742**
CP: **151-13817**
Plt ID: **151-00055**
Reviewer: ERG/RB
Date: February 1, 2001

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
21.2	185.7

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.706	0.706	0.056	9.286	0.511	7.800

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: **AAA Galvanizing, Inc.**
Address City IN Zip: **7825 S. Homesead, Hamilton, Indiana 46742**
CP: **151-13817**
Plt ID: **151-00055**
Reviewer: ERG/RB
Date: February 1, 2001

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.950E-04	1.114E-04	6.964E-03	1.671E-01	3.157E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.643E-05	1.021E-04	1.300E-04	3.529E-05	1.950E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Galvanizing Kettle

Company Name: **AAA Galvanizing, Inc.**
Address City IN Zip: **7825 S. Homesead, Hamilton, Indiana 46742**
CP: **151-13817**
Plt ID: **151-00055**
Reviewer: ERG/RB
Date: February 1, 2001

	Tons/Year	Lbs/hr
PM Emission Rate	10.29	2.35